

Respiratory Disease Outbreak in a LTCF

Case Study

You are the epidemiologist at the local health Department. On Monday August 9th, you receive a call from the infection preventionist (IP) at the local Long-Term Care Facility. The IP sounds very alarmed and she reports that she has several residents with respiratory symptoms, some with high fever and possibly pneumonia. She is asking for your recommendations.

- 1- Is the facility experiencing an outbreak?
- 2- Can you give recommendations based on this information? Why?
- 3- What are your next questions for the IP?

She tells you that on Aug 7th they had 3 symptomatic residents in the nursing home facility and on Aug 8th they had 4 more residents with similar symptoms. Two of the residents had fever of 102 F and one of them was hospitalized. The rest may or may not have had mild fever. The hospitalized patient has a history of aspiration. No ill residents are in the assisted living unit. Most ill residents have upper respiratory symptoms, such as sore throat and congestion. She also mentions that the facility physician examined all patients and prescribed a Z-Pack and Levaquin (antibiotics). She explains to you that she does not know what you mean by the baseline rates and why you need it.

- 4- What is the clinical and epidemiologic significance of this information?
- 5- How would you answer the IP's question regarding the baseline rates?
- 6- Is there more information that you need to know?
Yes or No. If yes, what type of information?

Respiratory Disease Outbreak in a LTCF Case Study

The IP tells you that they have 2 separate units in the same floor. One unit has a maximum capacity of 68 residents and currently houses 65, mostly Alzheimer's patients. This unit has 65 staff members. The other unit is an assisted living facility and has 37 residents and 31 employees. The facility has two nurse stations, one for each unit, one large dining room, a social room and one hall for physical therapy and rehabilitation. Residents from the assisted living facility share the dining and social activities with the nursing home facility.

7- What are your initial recommendations to the IP?

8- What are the challenges that you may anticipate with this particular population?

The next day, you make a decision to visit the facility after the IP reports 5 more residents in the nursing facility became sick over night. She also tells you that the rapid test results for the initial 7 patients were negative for influenza A and B. She also informs you that she does not have the lab supplies to do the nasopharyngeal swabs you recommended.

9- What and who do you need to have with you during this field investigation?

10-What are the objectives of your field investigation?

11-What is your initial case definition?

Respiratory Disease Outbreak in a LTCF

Case Study

With help from the IP and your team you were able to complete the following line list
(See enclosed)

12-What do you think of this line list?

13-Is this likely to be influenza? Yes or No
Why is this important?

14-Based on the clinical and epidemiological data, what is your differential diagnosis?

On August 16th, you receive lab results from OLS indicating that the initial 7 patients tested negative for influenza (PCR) and also negative for adenovirus, RSV, and parainfluenza (viral culture). No more new cases have occurred among residents since August 11th. The last case was a staff member with an onset date of August 13th. The hospitalized patient was discharged after being diagnosed with aspiration pneumonitis.

15-The IP is asking you if they can loosen up the infection control measures and accept new admissions. What do you think?

16-She also asks you when she can allow the sick staff to come back to work.
What would your response be?

Respiratory Disease Outbreak in a LTCF Case Study

On August 17th you get a report from CDC regarding the TLDA test results of the initial 7 patients. 6/7 patients tested positive for

17-What are the lessons learned from this outbreak?